

FIG. 2

Web Server

FIG. 3

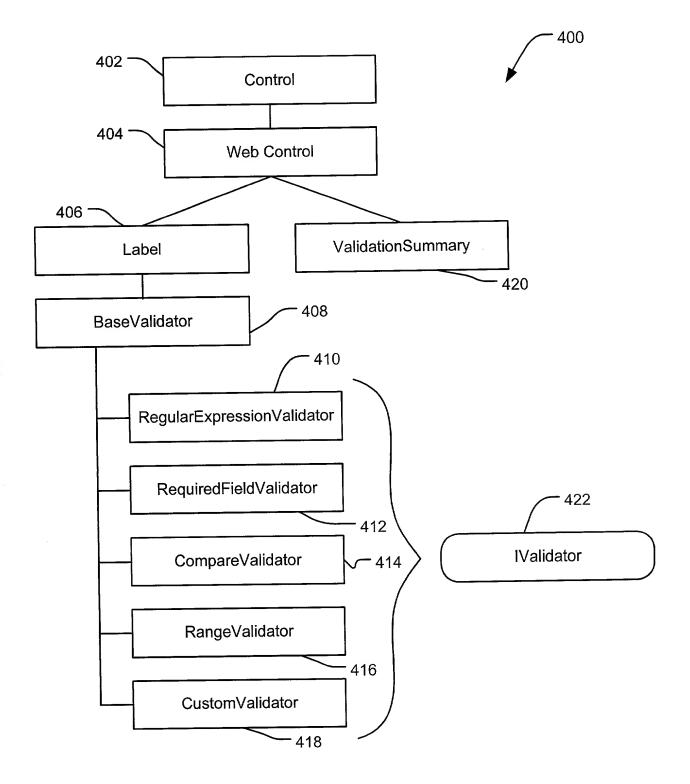


FIG. 4

```
(1)
      namespace System.Web.UI
(2)
(3)
             public interface IValidator
(4)
(5)
                    // Properties
                    public Boolean
(6)
                                         IsValid
                                                              {get;set;}
                    public String
(7)
                                         ErrorMessage
                                                              {get;set;}
(8)
(9)
(10)
                    // Methods
                    public void
                                         Validate();
(11)
             }
(12) }
```

```
namespace System.Web.Ul
(1)
(2)
       {
               [AttributeUsage(AttributeTargets.Class)] public class ValidationProperty : Attribute
(3)
(4)
(5)
                       // Properties
(6)
                                               ValidationProperty {get;}
                       public String
(7)
(8)
                       // Constructor
(9)
                                       ValidationProperty(String propertyName);
                        public
(10)
(11)
               }
(12)
       }
```

```
namespace System.Web.UI
(1)
(2)
             public class Page : TemplateControl
(3)
(4)
                    // Properties
(5)
                    public Boolean
                                                      IsValid
                                                                          {get;}
(6)
                                                                          {get;}
                                                      Validators
                    public ValidatorCollection
(7)
(8)
             }
(9)
      }
```

FIG. 7

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```
(1)
       namespace System.Web.Ul
(2)
             public class BaseValidator : Label, IValidator
(3)
(4)
                     // Properties
(5)
                                                                     {get; set;}
                                                ControlToValidate
                     public String
(6)
                                                                     {get; set;}
                     public Boolean
                                                IsValid
(7)
                                                                     {get; set;}
                                                ErrorMessage
                     public String
(8)
                     public ValidatorDisplay
                                                                     {get; set;}
                                                Display
(9)
                                                                     {get; set;}
                                                Text
                     public String
(10)
                                                EnableClientScript {get; set;}
                     Public Boolean
(11)
(12)
                     // Methods
(13)
                                                Validate();
                     public void
(14)
              }
(15)
(16)
              public enum ValidatorDisplay
(17)
(18)
                                   // Validator is always invisible; used when the error
(19)
                     None = 0;
                                   // message is only shown in a ValidationSummary
(20)
                                   // Validator takes up space even when hidden
(21)
                     Dynamic = 2; // Validator takes up space only when visible
(22)
(23)
              }
(24)
       }
```

```
800 7
```

FIG. 9

```
(1) namespace System.Web.UI
(2) {
(3) public class RequiredFieldValidator : BaseValidator
(4) {
(5) // Properties
(6) public String InitialValue {get;set;}
(7) }
(9) }
```

```
1100 -
```

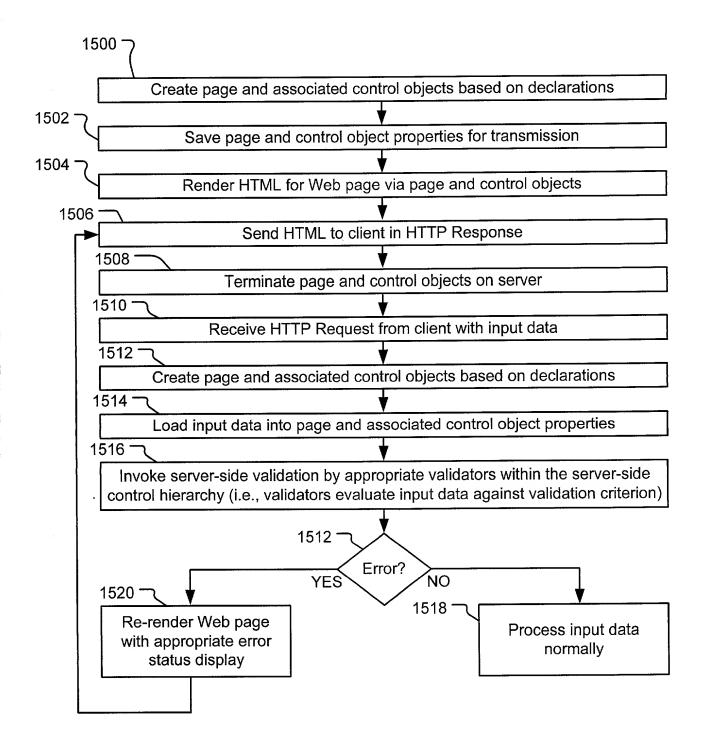
```
(1)
             namespace System.Web.UI
       (2)
             {
                    public class CompareValidator : BaseValidator
       (3)
       (4)
       (5)
                           // Properties
                           public ValidationDataType
                                                                          {get; set;}
                                                             Type
       (6)
                           public ValidationCompareOperator
                                                                                 {get; set;}
                                                                    Operator
       (7)
                                                             ControlToCompare {get; set;}
                           public String
       (8)
                                                             ValueToCompare {get; set;]
                           public String
       (9)
       (10)
       (11)
                    public enum ValidationComparisonOperator
       (12)
       (13)
                           Equal = 0,
       (14)
                           NotEqual = 1,
       (15)
                           GreaterThan = 2,
       (16)
                           GreaterThanEqual = 3,
       (17)
                           LessThan = 4,
       (18)
                           LesserThanEqual = 5,
       (19)
                           DataTyhpeCheck = 6,
       (20)
       (21)
                    public enum ValidationDataType
       (22)
       (23)
}=<u></u>
                            String = 0,
       (24)
                            Integer = 1,
       (25)
                            Double = 2,
       (26)
                            Date = 3,
       (27)
                            Currency = 4,
       (28)
                     }
       (29)
       (30)
              }
```

```
namespace System.Web.UI
(1)
(2)
      {
             public class RangeValidator : BaseValidator
(3)
(4)
                   // Properties
(5)
                   public ValidationDataType
                                                    Type {get;set;}
(6)
                                                    MinimumControl
                                                                        {get;set;}
                   public String
(7)
                                                                        {get;set;}
                                                    MinimumValue
                   public String
(8)
                                                    MaximumControl
                                                                        {get;set;}
                   public String
(9)
                                                    MaximumValue
                                                                        {get;set;}
                   public String
(10)
(11)
             }
(12) }
```

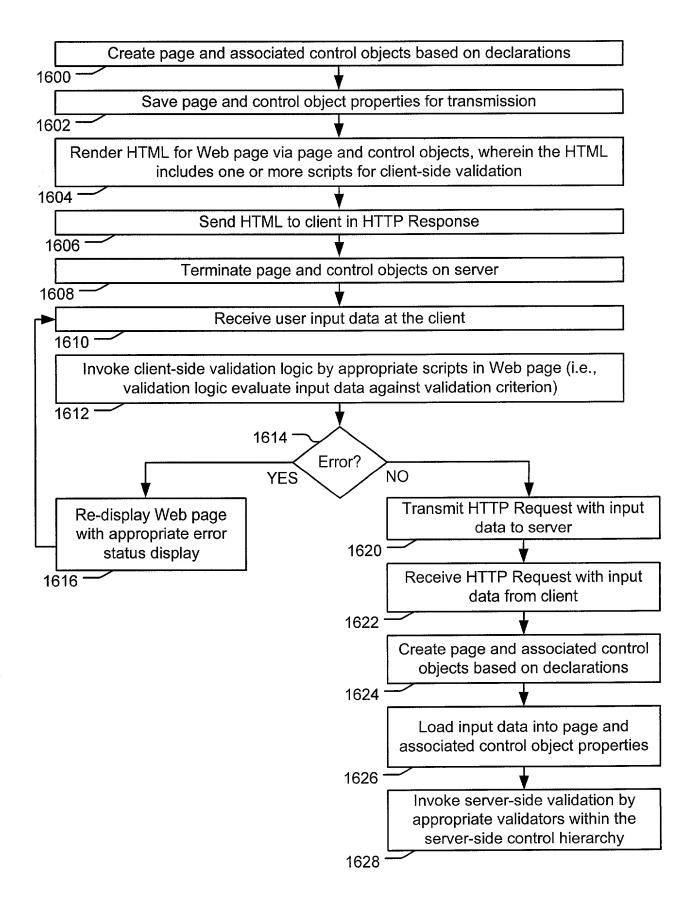
FIG. 12

```
namespace System.Web.UI
(1)
(2)
             public class CustomValidator : BaseValidator
(3)
(4)
                    // Properties
(5)
                    public String
                                        ClientValidationFunction
                                                                   {get;set;}
(6)
                                        OnServerValidationFunction(Object Source,
                    public Event void
(7)
                                                                          {get; set;}
                                 ServerValidateEventArgs Value)
(8)
             }
(9)
             public class ServerValidateEventArgs: EventArgs
(10)
(11)
                    public ServerValidateEventArgs(string value, Boolean isValid);
(12)
                    public String Value {get;}
(13)
                    public Boolean IsValid {get;set;}
(14)
(15)
(16)
     }
```

```
namespace System.Web.UI
                                    (1)
though the the their them their thei
                                    (2)
                                                                        {
                                                                                                              public class ValidationSummary: WebControl
                                    (3)
                                    (4)
                                                                                                                                                  // Properties
                                    (5)
                                                                                                                                                  public String
                                                                                                                                                                                                                                                                                                                                                                              HeaderText
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             {get; set;}
                                     (6)
                                                                                                                                                  public ValidationSummaryDisplayMode DisplayMode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             {get; set;}
                                    (7)
                                                                                                                                                                                                                                                                                                                                                                              ShowSummary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             {get; set;}
                                    (8)
                                                                                                                                                  public Boolean
H Gras sun
                                                                                                                                                                                                                                                                                                                                                                              ShowMessageBox {get; set;}
                                                                                                                                                  public Boolean
                                    (9)
                                    (10)
                                                                                                              }
                                                                                                              public enum ValidationSummaryDisplayMode
                                    (11)
 i
i
TŲ.
                                    (12)
(13)
                                                                                                                                                   List = 0;
 ļ.
                                                                                                                                                    BulletList = 1;
                                     (14)
                                                                                                                                                    SingleParagraph = 2;
                                    (15)
                                      (16)
                                                                                                              }
                                     (17) }
```



**FIG. 15** 



**FIG. 16** 

FIG. 17

